

# Claims

- [c1] 1. Disc brake for a heavy vehicle having an axle pressure between 6 and 14 tons, comprising a disc-shaped rotor (8) consisting of a cast iron alloy and having a radius  $R$  and a calliper (32) supporting a brake lining (32) which is intended to be pressed against the said rotor (8) during braking, in which the said rotor (8) and brake lining (32) are arranged to absorb a brake power corresponding to a braking torque between 12 and 25 kNm and in which the said brake lining (32) has a radial extent  $B$ , characterized in that the ratio  $B/R$  between the radial extent  $B$  of the lining (32) and the radius  $R$  of the rotor (8) is less than 0.38.
- [c2] 2. Disc brake according to Claim 1, characterized in that the said brake lining (32) is designed to absorb a brake power corresponding to a braking torque amounting to 25 kNm and in that the said brake lining (32) has a radial extent of less than 80 mm.
- [c3] 3. Disc brake according to Claim 1, characterized in that the said brake lining (32) is designed to absorb a brake power corresponding to a braking torque amounting to 20 kNm and in that the said brake lining (32) has a radial

extent of less than 75 mm.

[c4] 4. Disc brake according to Claim 1, characterized in that the said brake lining (32) is designed to absorb a brake power corresponding to a braking torque amounting to 16 kNm and in that the said brake lining (32) has a radial extent of less than 70 mm.

[c5] 5. Disc brake according to any of the preceding claims, characterized in 25 that the said rotor (8) is of substantially symmetrical configuration with respect to a plane running at right angles through the rotational axis and has a central bushing (12) intended for fastening to a wheel axle (6), the wear surfaces of the brake disc remaining flat when heated.

[c6] 6. Disc brake according to any of the preceding claims, characterized in that the radius of the rotor (8) is greater than 185 mm.

[c7] 7. Disc brake according to any of the preceding claims, characterized in that the brake lining (32) is configured having a tangential modulus of elasticity  $E$  greater than 400 Mpa at a contact pressure of 2 MPa at room temperature.

[c8] 8. Disc brake according to any of the preceding claims, characterized in that the said calliper (30) supports two

brake cylinders which are meant to press the brake lining against the rotor.

- [c9] 9. Vehicle having an axle pressure between 6 and 14 tons, comprising a disc brake having a disc-shaped rotor (8), consisting of a cast iron alloy and having a radius  $R$ , and a calliper (30) supporting a brake lining (32) which is intended to be pressed against the said rotor (32) during braking, in which the said brake lining (32) has a radial extent  $B$ , characterized in that the ratio  $B/R$  between the radial extent  $B$  of the lining (32) and the radius  $R$  of the rotor (8) is less than 0.38.
- [c10] 10. Vehicle according to Claim 9, characterized in that the said axle pressure amounts to between 11 and 14 tons and in that the said brake lining (32) has a radial extent of less than 80 mm.
- [c11] 11. Vehicle according to Claim 9, characterized in that the said axle pressure amounts to between 8.5 and 11 tons and in that the said brake lining (32) has a radial extent of less than 75 mm.
- [c12] 12. Vehicle according to Claim 9, characterized in that the said axle pressure amounts to between 6 and 8.5 tons and in that the said brake lining (32) has a radial extent of less than 70 mm.

